

Proposed Lands with Wilderness Characteristics

## GRAND WASH CLIFFS

Public Lands along the Grand Wash Cliffs, Arizona



A proposal report the Bureau of Land  
Management, Kingman Field Office, Arizona

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ARIZONA  
WILDERNESS  
COALITION

## ***Table of Contents***

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*PREFACE: This Proposal was developed according to BLM Manual 6310* P. 3

### ***Section 1: Overview of the Proposed Lands with Wilderness Characteristics***

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*Unit Introduction: Overview map showing unit location and boundaries* P. 6

- *Provides a brief description of unit boundaries, characteristics, and scenic photo points*

*Wilderness Study History: Map showing 1980 Wilderness Study Area boundaries* P. 7

- *Provides a brief description of unit boundaries and wilderness characteristics of the Grand Wash Cliffs Wilderness Study Area*

### ***Section 2: Documentation of Wilderness Characteristics***

---

*The proposed LWC meets the minimum size criteria for roadless lands* P.8

*The proposed LWC is affected primarily by the forces of nature* P.8

*The proposed LWC has outstanding opportunities for solitude and primitive and unconfined recreation* P.9

*Supplemental Values* P.11

*Scenic Photos: images that capture the wilderness character of the proposed LWC* P.12

### ***Section 3: Maps and Description of the Unit Boundary, Routes, and Impacts***

---

*Overview map showing photo data locations and the extent of inset maps* P.22

*Inset maps with photopoint locations* P.23

*Narrative description of the proposed LWC boundary and vehicle routes* P.26

### ***Section 4: Photopoint Data***

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*Data tables and geotagged photographs to accompany the detailed boundary & vehicle routes description* P.28

## Grand Wash Cliffs Proposed LWC

PREFACE: This Proposal was developed according to BLM Manual 6310 General Overview

Instruction Memorandum 2011-154 and Manuals 6310 and 6320 set out the BLM's approach to protecting wilderness characteristics on public lands. This guidance acknowledges that wilderness is a resource that is part of BLM's multiple use mission, requires the BLM to keep a current inventory of wilderness characteristics, and directs the agency to consider protection of these values in land use planning decisions.<sup>1</sup>

In March 2012, the Bureau of Land Management issued updated manuals for inventorying and managing Lands with Wilderness Characteristics on public lands (hereafter often referred to as LWC's). These manuals provide the agency with direction for implementing its legal obligations to inventory and consider management of Lands with Wilderness Characteristics, including the Federal Land Policy and Management Act's provision that BLM "preserve and protect certain public lands in their natural condition" (43 U.S.C. § 1701(a)(8)). **Manual 6310** (Conducting Wilderness Characteristics Inventory on BLM Lands) guides the BLM on how to meet its obligations to inventory for and identify lands with wilderness characteristics. **Manual 6320** (Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process) guides the BLM on the options available to address lands with wilderness characteristics in land use planning once they have been identified in the required inventory, such as putting management prescriptions in place to protect wilderness characteristics. **The purpose of this report is to provide the BLM with recommendations for designation of Lands with Wilderness Characteristics in the Kingman Field Office of northwestern Arizona, based on new, accurate, and up- to-date information, collected and presented according to the requirements described in Manual 6310.**<sup>2</sup>

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<sup>1</sup>Memorandum 2011-154 is available online at:

[http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2011/IM\\_2011-154.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2011/IM_2011-154.html)

<sup>2</sup> Manual 6310 is available online at:

[http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_manual.Par.38337.File.dat/6310.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.38337.File.dat/6310.pdf)

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## *Grand Wash Cliffs Proposed LWC*

*What does Manual 6310 require for the identification of LWC's?*

Minimum standard for LWC proposals are described in Manual 6310 in section .06.B.1. There are three things required in a citizen's wilderness proposal in order to meet the minimum standard for BLM to consider it in an inventory and to consider it as new information:

- Detailed map with specific boundaries;
- Detailed narrative of the wilderness characteristics; and
- Photographic documentation.

Once there is new information that meets these standards, then "as soon as practicable, the BLM shall evaluate the information," including field checking as needed and comparing with existing data to see if previous conclusions remain valid. Further, BLM will document its rationale and make it available to the public (section .06.B.2). **This proposal report provides the three necessary criteria listed above.**

*What does Manual 6310 require for an area to be identified as an LWC?*

The requirements for determining whether lands possess wilderness characteristics are found in Manual 6310, section .06.C.2. Lands with Wilderness Characteristics must possess the following traits:

### • **Size**

Sufficient roadless area to satisfy size requirements (5,000 acres, of sufficient size to make management practicable or "any roadless island of the public lands"; or contiguous with Wilderness, Wilderness Study Areas, USFWS areas Proposed for Wilderness, Forest Service WSAs or areas of Recommended Wilderness, National Park Service areas Recommended or Proposed for Designation).

### • **Naturalness**

Affected primarily by the forces of nature – The criteria is "apparent naturalness" which depends on whether an area looks natural to "the average visitor who is not familiar with the biological composition of natural ecosystems versus human affected ecosystems." This is an important distinction between ecological integrity and apparent naturalness.

Human impacts – Human impacts must be documented and some are acceptable so long as they are "substantially unnoticeable"; Examples include trails, bridges, fire rings, minor radio

repeater sites, air quality monitoring devices, fencing, spring developments, and stockponds.

Outside human impacts – impacts outside the area are generally not considered, but major outside impacts should be noted and evaluated for direct effects on the entire area (the manual explicitly cautions BLM to “avoid an overly strict approach”).

• **Outstanding opportunities for either solitude or primitive and unconfined recreation**

The area does not have to possess both opportunities for solitude and primitive and unconfined recreation, nor does the area need to have outstanding opportunities on every acre; BLM cannot compare lands in question with other parcels; BLM cannot use any type of rating system or scale.

• **Supplemental values**

Ecological, geological, scientific, scenic, educational or historical features should be documented where they exist, although they are not required traits.

*What does Manual 6310 require for the identification of the boundaries of an LWC?*

Boundaries should be based on wilderness inventory roads and naturalness rather than opportunities for solitude or primitive and unconfined recreation. For inventorying wilderness characteristics, BLM will use the “road” definition from FLPMA’s legislative history; the term “road” and “wilderness inventory road” are interchangeable in this guidance. The AWC survey team took a very literal, maintenance-driven approach to road/way determination.

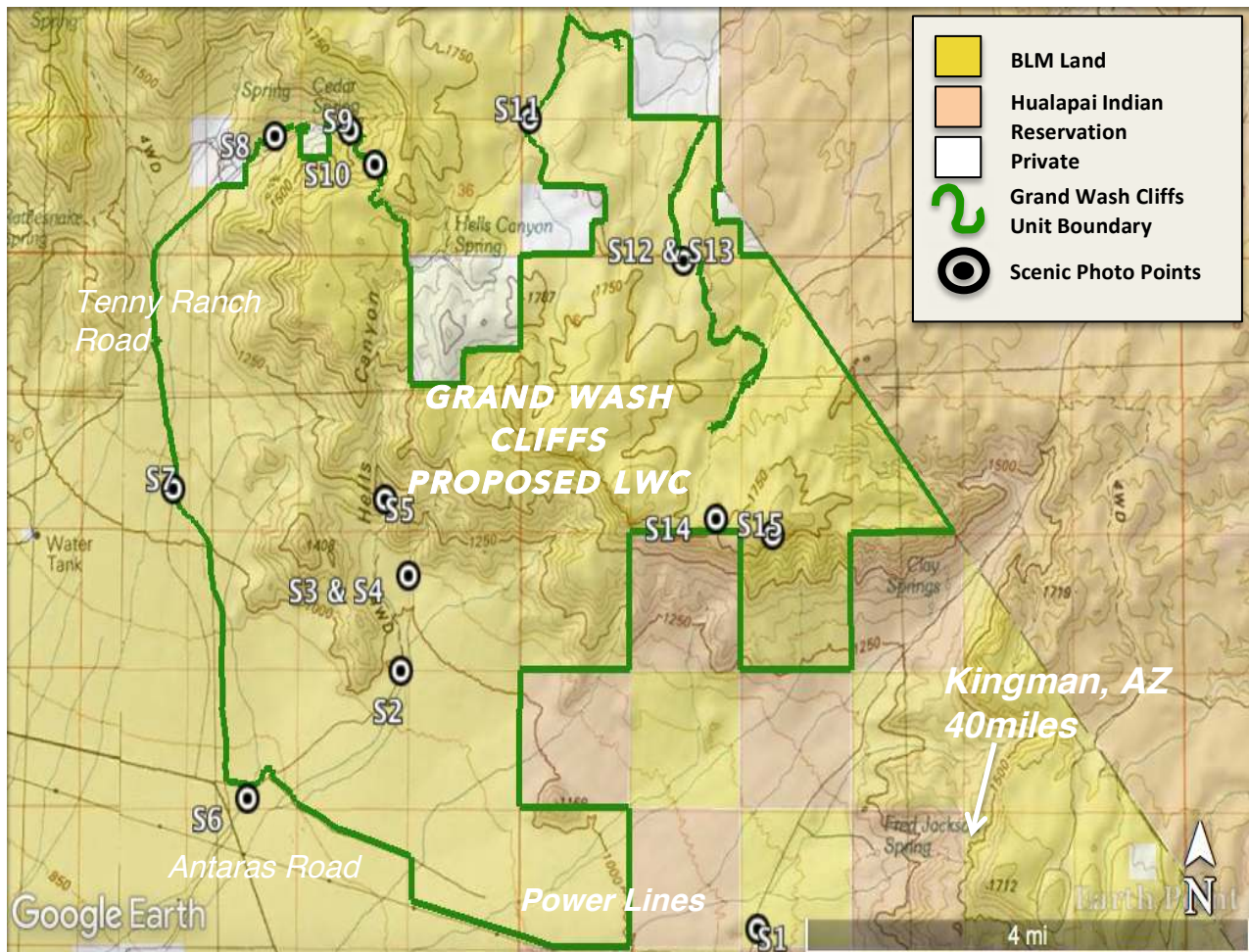
• “Wilderness inventory roads” are routes which have been: (1) *improved and maintained* (when needed), (2) *by mechanical means* (but not solely by the passage of vehicles), (3) *to insure relatively regular and continuous use*.

• “Primitive routes” or “ways” are transportation linear features located within areas that have been identified as having wilderness characteristics and not meeting the wilderness inventory road definition.

• Lands between individual human impacts should not be automatically excluded from the area; no setbacks or buffers allowed; boundaries should be drawn to exclude developed rights-of-way; “undeveloped rights-of-way and similar possessory interests (e.g. as mineral leases) are not treated as impacts to wilderness characteristics because these rights may never be developed”; areas can have wilderness characteristics even though every acre within the area may not meet all the criteria.



**Section 1: Overview of the Proposed Lands with Wilderness Characteristics**

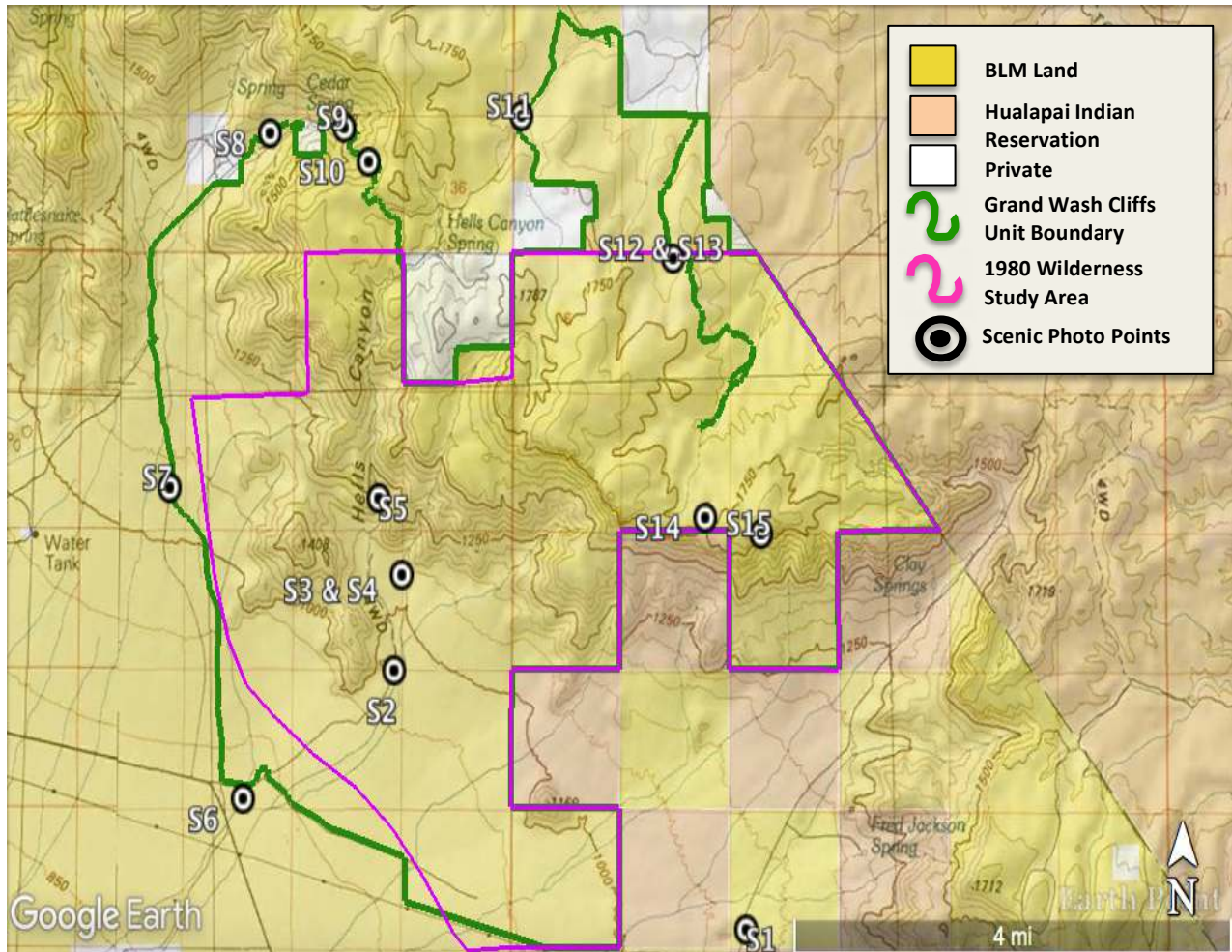


**Grand Wash Cliffs Unit Summary Map** The 15,500-acre Grand Wash Cliffs proposed LWC straddles the western edge of the Colorado Plateau. Here, sheer cliffs of Cambrian, Devonian, and Mississippian sedimentary rocks, called the Grand Wash Cliffs, create roughly 1,000 feet of vertical relief in a short distance. Beneath these cliffs, ridges and foothills of Precambrian granitic rock extend into the landscape. The steep, rugged altitudinal gradient found here marks a transitional zone from Mohave Desert to higher elevation species assemblages. This transition forms an eco-tone, undoubtedly a biodiversity hotspot. Here, a backcountry recreationist can travel from warmer Mohave desert scrub, creosote-laden bajadas, up through granitic boulder-filled canyons, into a vast, sloping landscape of piñon-juniper, sagebrush-steppe, and interior chaparral ecosystems. The topographic and vegetative diversity of this unit creates outstanding opportunities for screening and thus solitude, and also for primitive and unconfined recreation in the forms of hunting, rock climbing, backpacking, horseback riding, and nature study.

The unit is located approximately 40 miles NNE of Kingman, AZ, straddling the Grand Wash Cliffs and including portions of the Hualapai Valley and Hualapai Plateau. Boundary elements of this unit consist of Hualapai Indian Reservation lands, private lands, power lines, and several wilderness inventory roads. The two named major routes are Antaras Road and Tenny Ranch Road. The unit appears natural; only two primitive ways enter the unit and other human impacts

## Grand Wash Cliffs Proposed LWC

are substantially unnoticeable and infrequent. Two cherrystems are present along the northern unit boundary. A short cherrystem leads to a functional, maintained water cistern. Another cherrystem leads to two stockponds, a cistern, and to a fully functional, maintained Arizona Game and Fish Wildlife Water Catchment titled “Music Mountains #8”.



**Wilderness Study History Summary Map** – In 1980 a portion of the currently proposed LWC was recognized to contain wilderness characteristics, and thus underwent wilderness study. The 1980 Wilderness Study Area (WSA) was also titled “Grand Wash Cliffs” and had a unit number of “02-15”. This WSA was recognized to satisfy size requirements, be in a state of apparent naturalness, and contain outstanding opportunities for solitude, and primitive and unconfined recreation, resulting from the unit’s diverse topography. The area covered in the 1980 WSA boundaries still reflects these characteristics, as does the additional acreage of the currently proposed Grand Wash Cliffs LWC.

## ***Section 2: Documentation of Wilderness Characteristics***

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### ***Size: The proposed LWC meets the minimum size criteria for roadless lands***

The Grand Wash Cliffs proposed LWC contains approximately 15,500 acres. This substantially exceeds the minimum size criteria of 5,000 acres. The 1980 Wilderness Study Area, also titled “Grand Wash Cliffs (unit number: 02-15)”, consisted of approximately 11,700 acres. The up-to-date proposed LWC exceeds this by approximately 3,800 acres. This additional acreage reinforces, accentuates, and adds to the wilderness characteristics of the unit.

### ***Naturalness: The proposed LWC is affected primarily by the forces of nature***

The Grand Wash Cliffs proposed LWC contains biodiversity and community structure representative of the ecosystems that one would expect to see in this region. Mohave desert scrub constitutes the flora of the lower elevations of the unit. Here, *Larrea tridentata*, *Acacia greggii*, *Yucca baccata*, *Yucca schidigera*, and several *Cylindropuntia* and *Opuntia* species characterize the landscape. Within the higher elevation reaches of the unit, piñon-juniper, sagebrush-steppe, and interior chaparral communities constitute the flora, often as eco-tones. Here, *Pinus monophylla*, *Juniperus osteosperma*, *Arctostaphylos spp.*, *Garrya flavescens*, *Rhus aromatica*, *Quercus turbinella*, and *Artemisia tridentata* characterize the landscape. These characteristic species are the proper constituents of the ecosystems present in this region.

Not only are the ecosystems themselves in an apparently natural state, they contain minimal human impacts. In 1980, the BLM also recognized this and noted a portion of the unit to be in a state of naturalness, which prompted Wilderness Study Area designation.

Regarding the 1980 Wilderness Study Area: “... *the unit is essentially natural because the few vehicle ways and water developments that remain within the unit are not substantially noticeable (BLM 1980)<sup>1</sup>.*”

The observations of the BLM in 1980 accurately describe the condition of the proposed LWC. Very few impacts are present within the unit boundaries, all of which are acceptable and substantially unnoticeable. The impacts present in the proposed LWC include one dilapidated, unused water development and two primitive ways.

The dilapidated, unused water development can be seen at the mouth of Hell’s Canyon. A BLM project marker is present at this site; the marker states “Project No. 4828 – Hell’s Canyon Spring Development – 1981”. A trough, cistern platform, and stockpond are all present here; all are in severe disrepair, are overgrown, and are substantially unnoticeable. There are pieces of cut, 3-inch, black piping which litter the ground amongst these impacts. The magnitude of this cumulative impact is not significant enough to substantially impact naturalness; all of these impacts are small in stature and are hidden by vegetative screening. Piping (Point 009) was traced up into Hell’s Canyon

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<sup>1</sup> BLM. 1980a. Wilderness Review: Intensive Inventory of Public Lands Administered by Bureau of Land Management. Proposal Report. Bureau of Land Management, Arizona State Office, Phoenix, AZ.



## *Grand Wash Cliffs Proposed LWC*

for several hundred feet to a well (Point 010). The piping is cut in several locations and disconnected from the well, which is laden with sediment. This piping and the well are substantially unnoticeable because of small stature and because they are tucked in the deep topography of Hell's Canyon.

Leading to the Hells Canyon Spring Development is a primitive way, which is kept open solely by the passage of vehicles (Points 002-005, 008). This primitive way no longer serves a purpose, and if access were barred, it would revegetate rapidly. It remains passable without proper maintenance because it exists along forgiving topography and is not prone to erosion. A large portion of this way follows a natural wash. Another primitive way (Point 027) has no destination, is revegetated, and is substantially unnoticeable. No other human impacts were found within the unit boundaries.

Two cherrystems exist along the northern unit boundary. One of these cherrystems leads to a maintained, used water cistern; it is short and minimally affects naturalness within the surrounding proposed LWC. Another cherrystem is quite long, and leads to two maintained stockponds, a maintained water cistern, and an Arizona Game and Fish Wildlife Water titled "Music Mountains #8". This lengthy cherrystem does not impact naturalness in the surrounding LWC. Public access to cherrystem is restricted to a select few; a locked gate on private land restricts access. Thus, use of this route is minimal and will minimally disrupt nearby recreationists nearby. Furthermore, all excluded features along the cherrystem are screened by piñon-juniper woodlands, and are barely noticeable from within the proposed LWC.

Other unit-exterior impacts do not substantially affect naturalness within the unit. Several parcels of private land exist along the unit boundaries, but they are largely undeveloped. In fact, the majority of the land surrounding the unit is largely undeveloped; this accentuates the wilderness characteristics existing within the proposed LWC boundary.

### *The proposed LWC has outstanding opportunities for solitude and/or primitive and unconfined recreation*

The stark altitudinal gradient along the edge of the Colorado Plateau has created a landscape of steep cliffs and canyons. Along this edge, fluvial geomorphic processes have run rampant over the past twenty million years, carving into the uplifted strata of the Colorado Plateau and yielding a landscape of immense topographic diversity. This geological, topographical, and altitudinal diversity is without a doubt the source of the unit's outstanding opportunities for solitude and also primitive/unconfined recreation.

### **Solitude**

The unit is comprised of three physiographic regions – (1) lower elevation flats and bajadas of the Hualapai Valley; (2) a steep, rugged, transitional region; and (3) higher elevation hills and drainages containing denser floral diversity atop the Colorado Plateau. Each of these regions offers unique opportunities for solitude. The BLM has long recognized that the area contains outstanding opportunities for solitude due to vegetative and topographic screening.

## Grand Wash Cliffs Proposed LWC

Regarding the 1980 Wilderness Study Area: *“The unit’s diverse topography and, in some places thick vegetation, provide outstanding solitude (BLM 1980).”*

The Hualapai Valley portion of the unit constitutes the smallest portion of the unit’s total acreage (see scenic photos S1 & S6). The massive, undeveloped edge of the Colorado Plateau towers over these flats, offering substantial topographic screening to the north. The flats themselves comprise a portion of the seemingly boundless Hualapai Valley. The linear extent of undisrupted flatness found here has its own implications on solitude. Without nearby unique topographic features to aid in scale, the human perception of distance becomes distorted. The often-incomprehensible vastness of places like this invokes a perception of emptiness, a perception in which a backcountry recreationist can experience solitude. Furthermore, the *Larrea tridentata* and *Acacia greggii* found here are considerably large in stature and relatively dense. Thus, vegetative screening is present here and screens recreationists from unit-exterior impacts in the Hualapai Valley.

Within the transitional region of the unit, solitude is seemingly infinite. Here, as a recreationist travels along, through, and into the edge of the Colorado Plateau beneath the Grand Wash Cliffs, topographic screening is plentiful. This region is carved into canyons and ridges, which are laden with exposed granite bedrock and boulders. Here, a hiker will frequently find themselves immersed in rock, and thus in a state of solitude (see scenic photo S5). The ruggedness of this region alone ensures a recreationist that they will likely not see anyone.

Atop the Grand Wash Cliffs, a visitor will encounter the rolling, densely vegetated landscape of the Colorado Plateau. Here, moderate topographic screening and significant vegetative screening provide solitude. The dendritic drainage system of this region has formed hills, slopes, and minor ephemeral streams, which offer topographic screening. Piñon-juniper woodlands are representative of much of this region; the understories vary and form eco-tones with a variety of species assemblages (see scenic photos S15-17). These woodlands, often old growth, offer significant screening and thus solitude, result of the growth forms of *Pinus monophylla* and *Juniperus osteosperma*. Unit-exterior impacts to solitude are also completely invisible under the cover of these species.

### **Primitive and Unconfined Recreation**

The opportunities for primitive and unconfined recreation are outstanding in this proposed LWC. Furthermore, there is eclectic variety of recreation forms, some of which are unique to the various physiographic regions of the unit. The BLM has long recognized that the area contains outstanding opportunities for primitive/unconfined recreation.

Regarding the 1980 Wilderness Study Area: *“The interesting terrain offers outstanding opportunities for several types primitive and unconfined recreation (BLM 1980).”*

The unit still contains interesting terrain.

The unit in its entirety offers excellent backpacking and day-hiking opportunities. Although difficult to traverse the unit’s entire altitudinal gradient because of the sheerness of the Grand Wash Cliffs, several routes do exist. An excellent, challenging route would begin in the lower

## *Grand Wash Cliffs Proposed LWC*

elevation, Mohave Desert portion of the unit. Next, maneuver up Hell's Canyon (see scenic photo S5) through and over granitic boulders and slabs, into the cover of the colder, piñon-juniper woodlands. Finally, work over to the edge of the Grand Wash Cliffs for an incredible view of northwestern Arizona. Day hikes are excellent within all regions of the unit.

This unit is especially interesting for nature-study because much of this unit is comprised of eco-tones: transitional zones between more than one biome. The upper elevation region of the unit is comprised of a few biomes (sagebrush-steppe, piñon-juniper, and interior chaparral), which overlap with one another and form eco-tones. Also, the steep, rugged transitional zone of this unit exhibits an eco-tone of upper Mohave desert scrub and piñon-juniper/interior chaparral biomes. This is a remarkably unique eco-tone made possible by the steep gradient exhibited here. Eco-tones can be exciting, insightful places for nature-study because they are inherently areas of higher biodiversity and are often novel. Here, not only do unique plant communities overlap with one another, but as do their associated fauna. Thus, this is not only a place to observe and study a large variety of species and biomes, but also novel species interactions.

The Precambrian granite beneath the Grand Wash Cliffs offers outstanding opportunities for rock climbing. The quality of this granite is impeccable; it has been weathered to perfection and is utterly solid. There are scattered outcrops within the unit that would interest a traditional climber searching for first ascents, but most of the potential lies in scrambling and proper bouldering. Granite boulders cover the landscape; some in massive piles, others cover the slopes, and others rest alone on the bajadas. Proper bouldering routes could easily be developed here. This place is also substantially interesting to the rock scrambler. For example, approaching Hell's Canyon from the south, following Hell's Canyon Wash, a massive pile of granite boulders is passed on the left (see scenic photo S2). Piles such as this offer outstanding opportunities for scrambling where one can explore caves, cracks, and slabs, and make their way to the top for a nice view.

This unit also offers outstanding opportunities for horseback riding. This can be done in the Mohave Desert region of the unit because the topography is flat and easily maneuverable, and also in the higher elevation, Piñon-Juniper region of the unit. However, it would be very difficult to bridge these two regions on horseback, as the land in-between is likely too rugged for a horse.

This higher elevation region of the unit offers outstanding opportunities for hunting. This portion of the unit is part of Arizona Game and Fish (AZGF) Game Management Unit 15A. The AZGF game water catchment along the northern unit boundary cherrystem stands testament to the hunting use of the region. Mule deer and mountain lion are the primary species hunted here.

*Supplemental Values*

**The unit is home to sensitive species of concern listed by Arizona Game and Fish**

The Heritage Data Management System, administered by Arizona Game and Fish Department, lists special-status species by USGS quadrangle. These lists can be found at [www.habimap.org](http://www.habimap.org)<sup>2</sup>. The proposed LWC's covers portions of two quadrangles, titled Quartermaster Canyon SW and Music Mountains NW. Four species of concern are listed: Golden Eagle, Mexican Vole, Red-Tailed Skink, and Swainson's Hawk. The conservation of these four sensitive species would be improved if this area were managed as an LWC.

*Scenic Photos*

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*Scenic Photo S1:* Looking north into the unit from Clay Springs Road. The land in the foreground is not within the unit boundaries, however the mountains are. Note the contrast from Mohave Desert flats and bajadas to mountainous terrain. This demonstrates the variety of opportunities for primitive/unconfined recreation.

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<sup>2</sup> AZGFD. Habimap. Date accessed: November 13, 2017. Online tool available at: [www.habimap.org](http://www.habimap.org).



*Grand Wash Cliffs Proposed LWC*



*Scenic Photo S2:* Looking north into the unit along the Hell's Canyon wash. Hell's Canyon is seen in the shadows (center-right). Here, *Acacia greggii*, *Opuntia spp.*, *Cylindropuntia spp.*, *Larrea tridentata*, and other Mohave desert scrub subshrubs cover the landscape. Precambrian granite boulders of excellent climbing quality are abundant here.



*Scenic Photo S3:* Looking southwest into the Hualapai Valley from within the shelter of granitic Mohave Desert ridges. The vegetation here consists *Opuntia spp.*, *Cylindropuntia spp.*, *Larrea tridentata*, and other Mohave desert scrub subshrubs and grasses.

## Grand Wash Cliffs Proposed LWC



*Scenic Photo S4:* A boulder of Precambrian granite sits on the bajada. The granitic slope beyond marks the beginning of the dramatic altitudinal gradient leading up to the Grand Wash Cliffs and onto the Colorado Plateau. Opportunities for scrambling and bouldering are outstanding here. Hell's Canyon is off to the left.



*Scenic Photo S5:* Travelling into and onto the Colorado Plateau via Hell's Canyon. Here, scrambling and route finding aren't options, but instead requirements. This an exciting place to explore by foot, searching for chasms and routes through the granite. Solitude is plentiful here. Several substantial granite walls exist here, and would definitely interest a technical, traditional rock climber.



## Grand Wash Cliffs Proposed LWC



Scenic Photo S6: Looking north into the proposed LWC from the unit boundary. The Grand Wash Cliffs are seen at the center towards the top of the mountains. Mohave Desert scrub is in the foreground.



Scenic Photo S7: Looking east into the unit from Tenny Ranch Road. Here, *Larrea tridentata* begins to become less dominant, as the Mohave Desert scrub community begins to transition into higher elevation species assemblages.

*Grand Wash Cliffs Proposed LWC*



*Scenic Photo S8:* Looking south into the unit while climbing Tenny Ranch Road onto the Colorado Plateau. This northern aspect, higher elevation slope hosts a piñon-juniper/Interior Chaparral eco-tone.



*Scenic Photo S9:* Looking west into the land surrounding the unit along Tenny Ranch Road. Note that most of the lands surrounding the unit are largely undeveloped, and make the unit feel larger than it is.





Scenic Photo S10: Looking south into the higher elevation, vast piñon-juniper woodlands of the unit. Here, interior chaparral species dominate the understory. *Artemisia tridentata* is present in the understory as well. Outstanding opportunities for hunting exist in this region.



Scenic Photo S11: Looking southeast into the unit along Tenny Ranch Road. Here, a small sagebrush-steppe community inhabits a basin of silty soils. *Pinus monophylla* and *Juniperus osteosperma* are present also.



*Grand Wash Cliffs Proposed LWC*



*Scenic Photo S12:* Looking northeast from the game water catchment cherrystem. Looking across the unit into the Hualapai Indian Reservation. Here piñon-juniper and interior chaparral species dominate the landscape. The slopes here are quite covered in limestone cobbles.



*Scenic Photo S13:* Looking WSW into the heart of the unit's piñon-juniper woodlands. Solitude is plentiful here in these vast woodlands with plentiful vegetative screening.



## Grand Wash Cliffs Proposed LWC



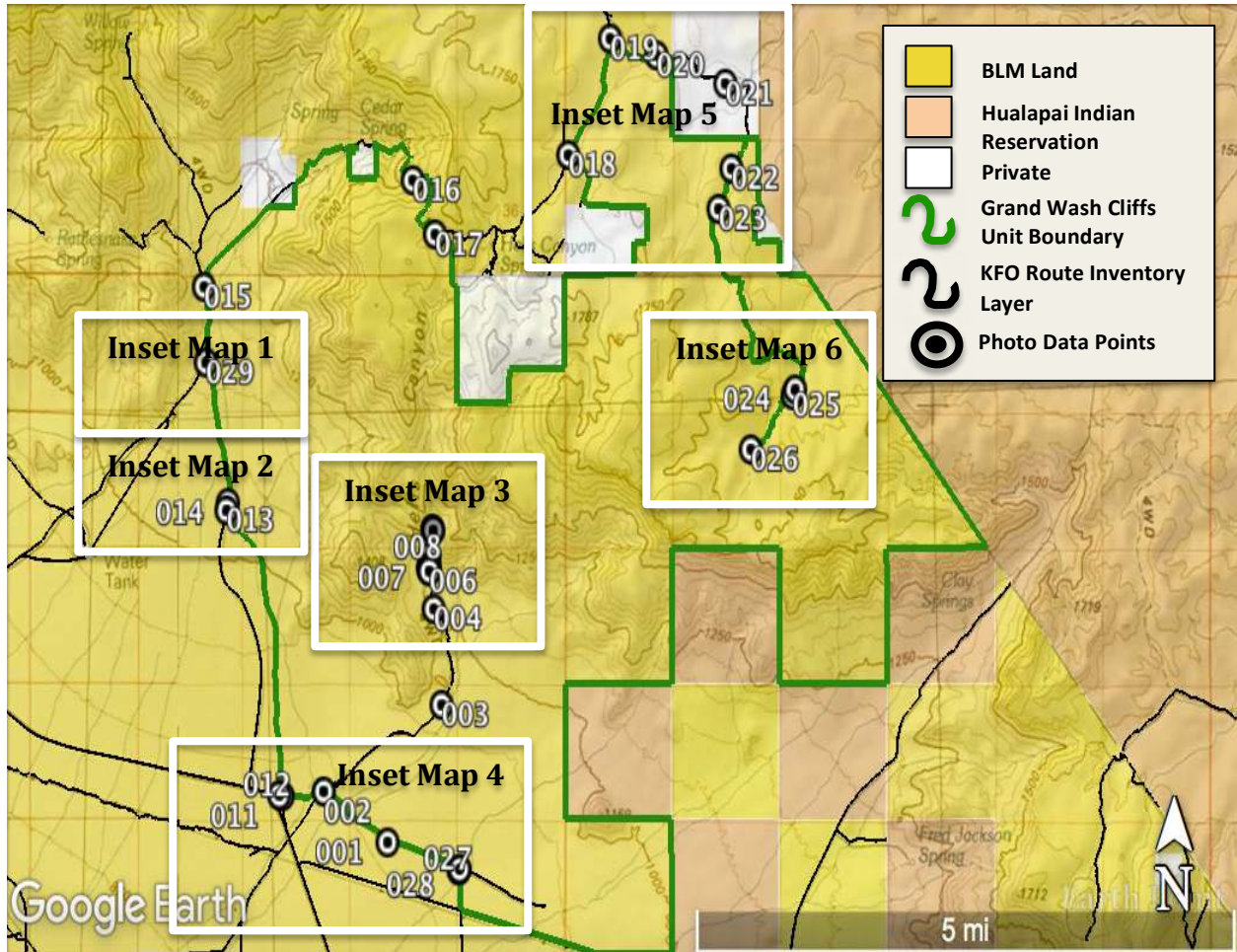
*Scenic Photo S14:* Approaching the Grand Wash Cliffs, looking NNE into the unit. Here, the understory of the piñon-juniper begins to become more open. *Cylindropuntia spp.*, *Opuntia spp.*, *Pursia stansburyana*, and grasses become more common here. *Agave utahensis* (seen in the cover photo) also occupies this area, adding unique character to the area with its massive flower stalks.



*Scenic Photo S15:* Looking west along the Grand Wash Cliffs. Note the piñon-juniper woodlands on the right, and the Mohave Desert on the left. The views west of here are absolutely incredible. From here, you can truly appreciate the altitudinal gradient and the ruggedness of the unit.



**Section 3: Maps and Description of the Unit Boundary, Routes, and Impacts**

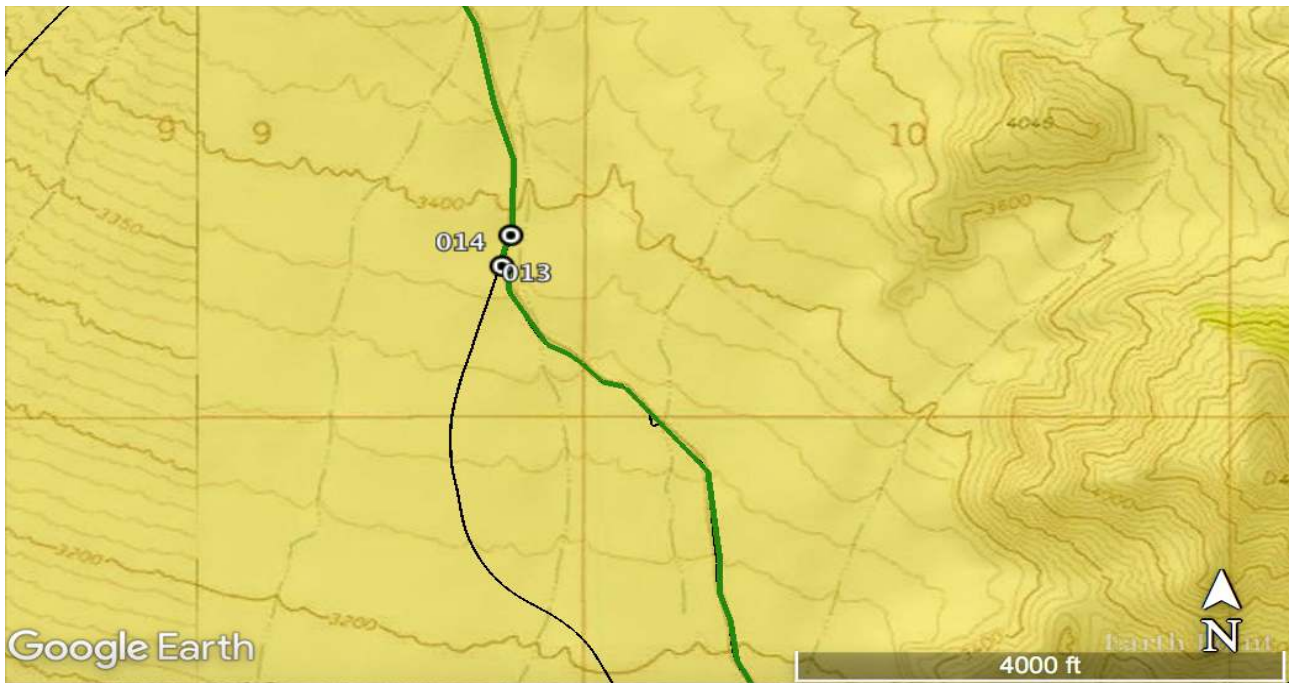


**Photo Data Point Locations and Key to Inset Maps** - This map is meant to be used locate where field survey data was collected and as a key to proceeding inset maps. Following this key on page 23, two inset maps can be found which offer increased clarity on specific photo point locations and their context. The layer titled 'KFO Route Inventory' reflects spatial data acquired from the BLM regarding the Kingman Field Office's route inventory. 'Photo data points' reflect location of qualitative data collected during the field survey, viewable in *Section 4* of this proposal.

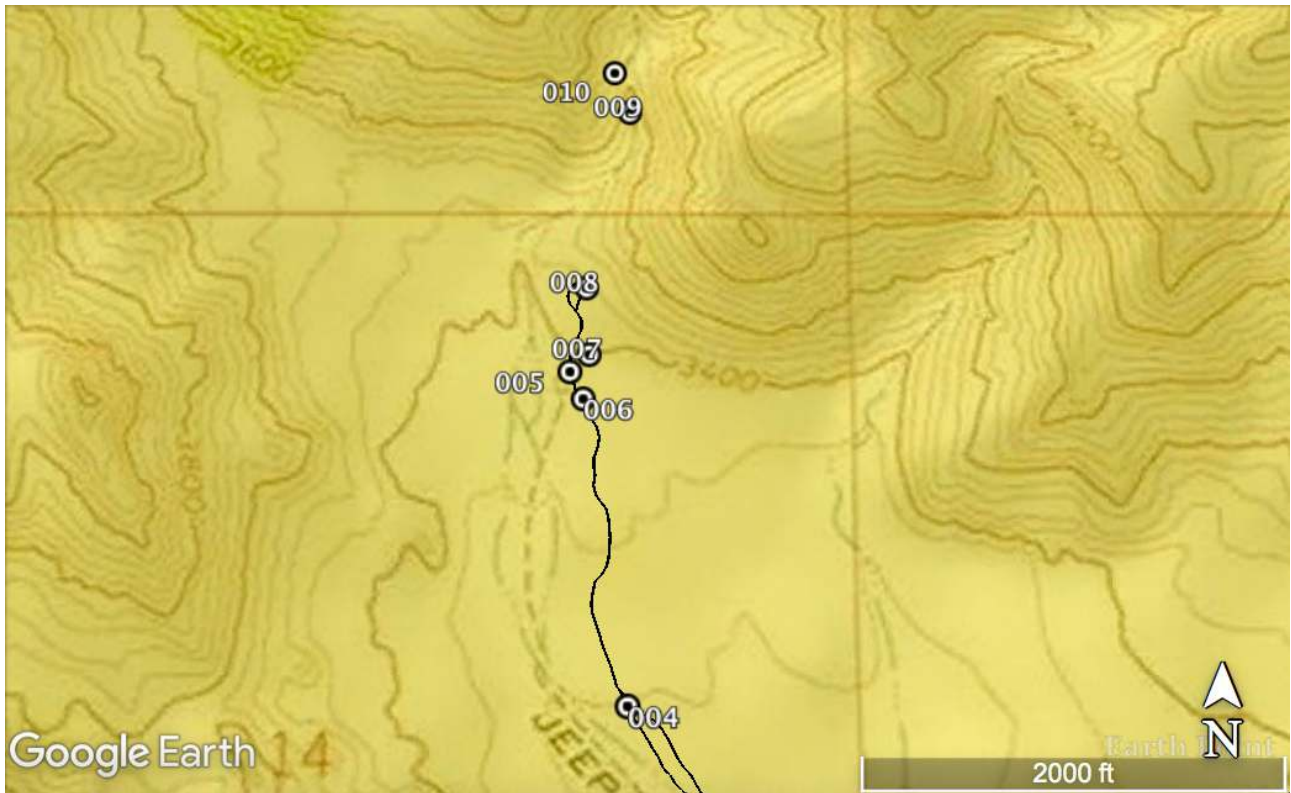




*Inset 1* – Point 029 shows a small exclusion. Here, a large metal tank is present. Instead of an access route, the entire area around the tank is disturbed and seems to be frequently used.



*Inset 2* – Points 013 and 014 show conditions of the unit boundary. Point 014 is on Tenny Ranch Road.



*Inset 3* - Point 004 shows a Way. Points 005-010 show impacts pertaining to the Hells Canyon Spring Development.

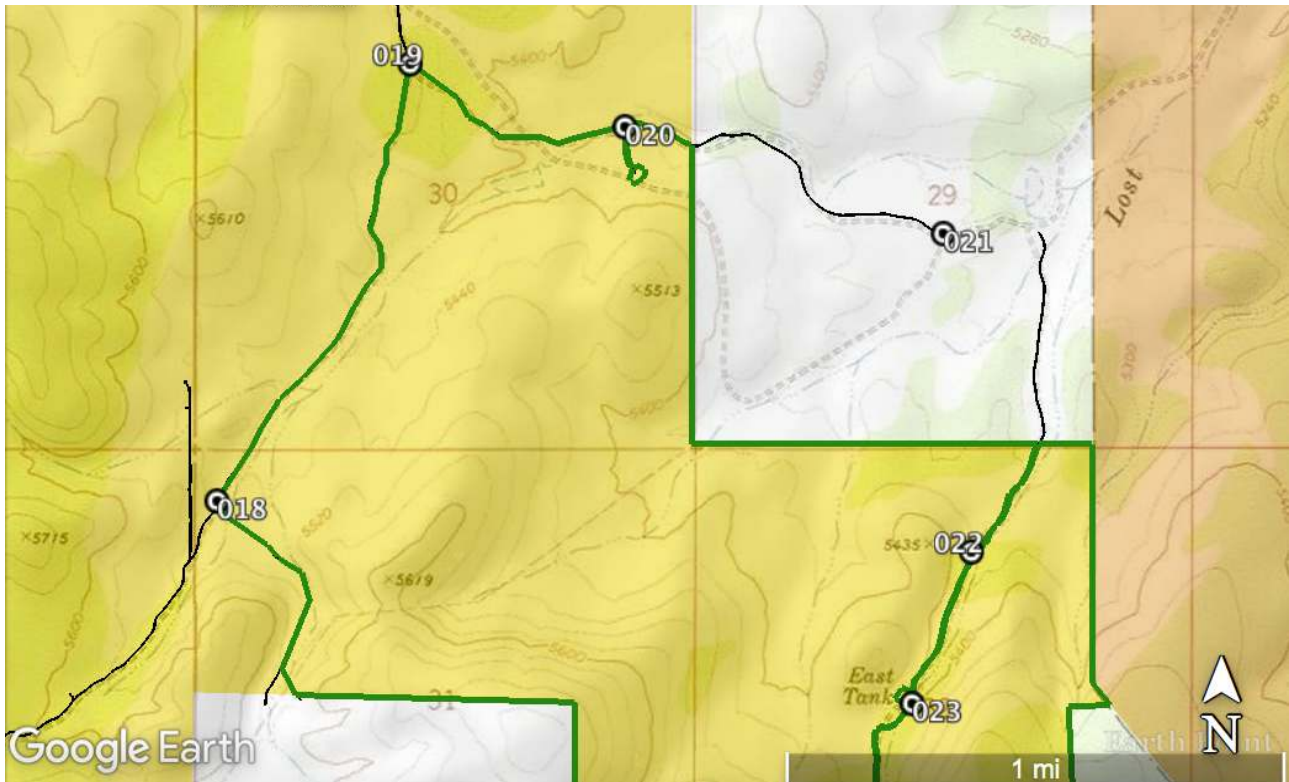


*Inset 4* - Points 011, 012, 001, and 028 show the conditions of the unit boundary. Points 002 and 027 shows primitive ways.

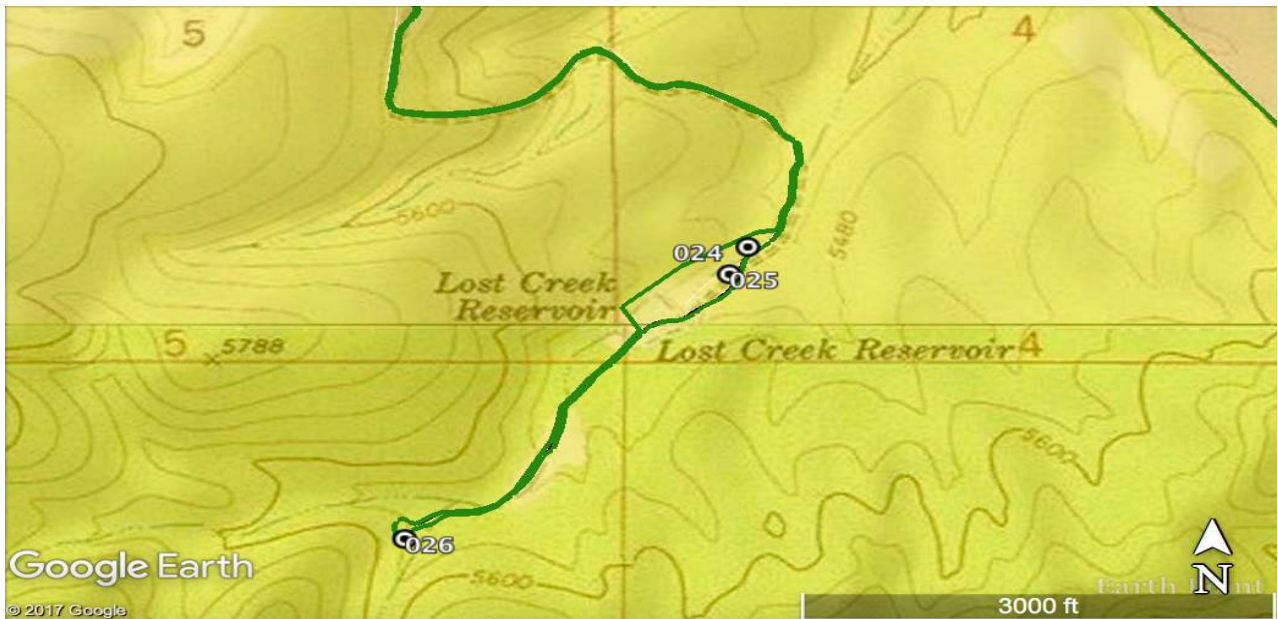


**Inset Maps with Photopoint Locations**

**Maps 5 & 6**



Inset 5 – Points 018 and 019 show the conditions of the unit boundary. Point 021 shows a locked gate which bars public access to the cherrystem shown at points 022 and 023. Point 020 shows another cherrystem.



Inset 6 – Points 024-026 show excluded impacts along a cherrystem.

## ***Narrative Description of the Proposed LWC Boundary and Vehicle Routes***

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Southern Boundary: Points **001-011, 027-028**; power lines, Hualapai Indian Reservation land, and wilderness inventory roads

- Checker boarding of Hualapai Indian Reservation land defines the southeastern corner of the unit boundary. This land is mostly undeveloped.
- **027** shows a revegetated Way with no purpose. It is unmaintained and shows no signs of use. This Way minimally affects naturalness and is substantially unnoticeable.
- **028** shows the condition of a wilderness inventory road and a maintained cistern which is excluded from the unit.
  - The road continues south until it meets power lines with an east/west vector, which then become the unit boundary.
- **001** shows the condition of a wilderness inventory road.
- Points **002-010** show a series of impacts pertaining to the Hell's Canyon Spring Development of 1981. This water development is unmaintained, severely dilapidated, and unused; its been this way for a long time. It's associated Way no longer serves a purpose and is kept open solely by the passage of vehicles.
  - **002, 003, 005, 008** show a Way associated with the water development.
    - **002** shows the condition of a Way. This route is passable and shows signs of use, however it is unmaintained and no longer serves a purpose. It is kept open solely by the passage of vehicles.
    - **003** again shows the condition of the Way.
    - **005** shows large vegetation growing in the Way, indicating lack of maintenance.
    - **008** shows the end of the Way. It ends at the mouth of Hell's Canyon and turns around. This section of the route is completely covered in grass, which indicates a lack of maintenance.
  - **004** shows another short Way. It is unmaintained, serves no purpose, and is impassable. It minimally affects naturalness.
  - **006** shows a cracked, unmaintained, non-functional water trough. It minimally affects naturalness and is substantially unnoticeable.
  - **007** shows a cracked, unused concrete water cistern platform and an overgrown, unused stockpond. Both are substantially unnoticeable and minimally affects naturalness.
  - **009** shows piping leading up Hell's Canyon to the well. This piping is severed in several places, likely the result of flash floods, which quite obviously travel through this canyon from time to time. The piping is substantially unnoticeable because it is small and tucked in a canyon and thus minimally affects naturalness.
  - **010** shows the Hell's Canyon well. It sits in the drainage bottom directly below a massive would-be waterfall. The piping leading into the well is severed and the well is laden with sediment, and thus not functional. It is substantially unnoticeable because it is tucked in a canyon and therefore minimally affects naturalness.



## *Grand Wash Cliffs Proposed LWC*

- **011** shows the condition of the unit boundary wilderness inventory road.
- Between **002** and **011** a corral is excluded from the unit boundary.

Western Boundary: Points **012-015, 029**; Tenny Ranch Road.

- **012-013** show the condition a unit boundary wilderness inventory road.
- **014-015** show the condition of Tenny Ranch Road, a wilderness inventory road.
- **029** shows an exclusion. A massive metal tank is here and some sort of livestock watering feature. The whole ground surface is impacted, showing signs of recent use. Instead of cherrysteming the KFO Route Inventory data shown here, a wider exclusion was included in the unit boundary because a greater area than the width of road is being utilized.

Northern Boundary: **016-026**; Tenny Ranch Road, private land.

- **016** shows the condition of Tenny Ranch Road, the unit boundary.
- **017** and **018** shows the condition of a wilderness inventory roads which accesses private land.
- **019** shows the condition of a wilderness inventory road at an intersection with Tenny Ranch Road.
- **020** shows the condition of a cherrystem road leading to a maintained water cistern. The water cistern is included in the cherrystem.
- **021** shows a locked gate on private land. This is significant because it bars access to the cherrystem showed at points **022-026**. Less traffic along this cherrystem means less impact to solitude within the unit.
- Points **022-026** show features along a cherrystem.
  - **022** shows the condition of the cherrystem route. It is constructed, maintained, and serves a purpose. It shows signs of recent use.
  - **023** shows East Tank. Although substantially unnoticeable and questionably in-use, it has been excluded from the unit boundary along the cherrystem.
  - **024-025** show an excluded rainwater catchment which feeds a water cistern. This is located next to Lost Creek Reservoir, which is also excluded.
  - **026** shows Arizona Game and Fish Wildlife Water 'Music Mountains #8.' This feature ends the cherrystem and is also excluded.

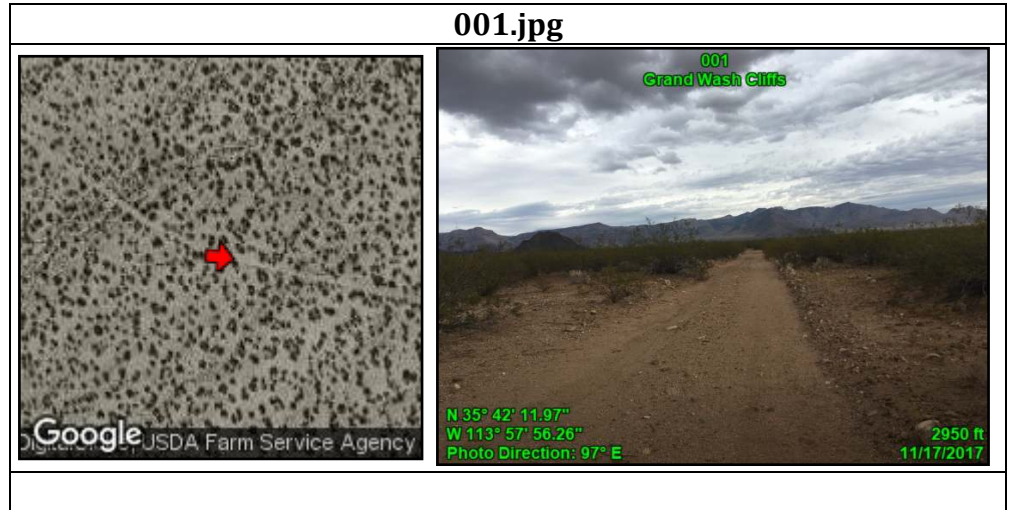
Eastern Boundary: No photo data exists along this boundary. This boundary is comprised of a couple parcels of private land, but predominately the Hualapai Indian Reservation.

This ends the narrative description.

**Section 4: Photopoint Data**

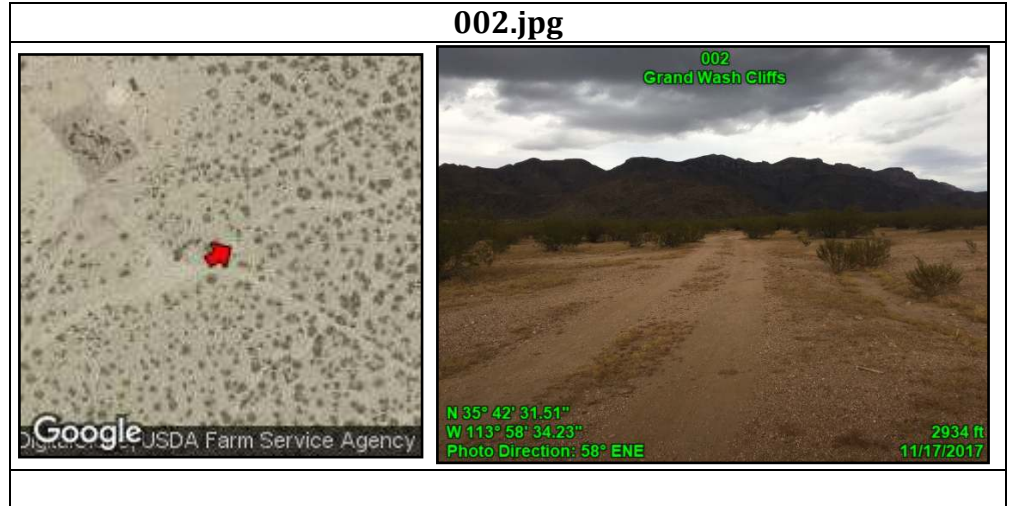
This section contains the photos and associated data tables for each point displayed on the inset maps and described in the boundary description. Data are presented in numbered order as they appear in the boundary description. The table associated with each point includes notes recorded in the field using GeoJot, supporting the rationale for including or excluding the feature in the unit. The associated map shows satellite imagery of the exact location and direction the photo was taken in. Maps, photos, and tables were produced in GeoJot Core.

Attributes	
Point	001
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	Unit Boundary
Route:	Semi-recent
Maintenance	evidence - 1-3 years ago
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element



Grand Wash Cliffs Proposed LWC

Attributes	
Point	002
Unit name	Grand Wash Cliffs
Route: name	None
Route: Construction	Minimal evidence of blading
Route: Improvements	None
Route: Use	2-WD Vehicles
Route: Purpose	No existing purpose; accesses dilapidated, unused ranching infrastructure
Route: Determination	Way
Other notes	Kept open solely by passage of vehicles
Route: Maintenance	None
Feature	Best section of route
Feature notes	None
Feature Class	None



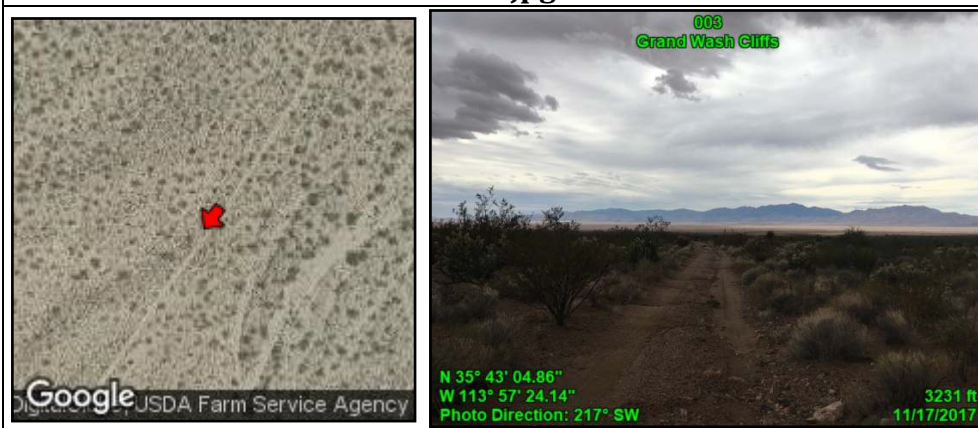


Grand Wash Cliffs Proposed LWC

**Attributes**

Point	003
Unit name	Grand Wash Cliffs
Route: name	None
Route: Construction	Minimal evidence of blading
Route: Improvements	None
Route: Use	2-WD Vehicles
Route: Purpose	No existing purpose; accesses dilapidated, unused ranching infrastructure
Route: Determination	Way
Other notes	Kept open solely by passage of vehicles
Route: Maintenance	None
Feature	Typical Condition of Route
Feature notes	None
Feature Class	None

003.jpg



Grand Wash Cliffs Proposed LWC

**Attributes**

Point	004
Unit name	Grand Wash Cliffs
Route: name	None
Route:	None
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	No apparent purpose
Route:	Way
Determination	
Other notes	Kept open solely by passage of vehicles
Route: Maintenance	None
Feature	Typical Condition of Route (Revegetating/Eroded)
Feature notes	Feature minimally affects naturalness
Feature Class	None

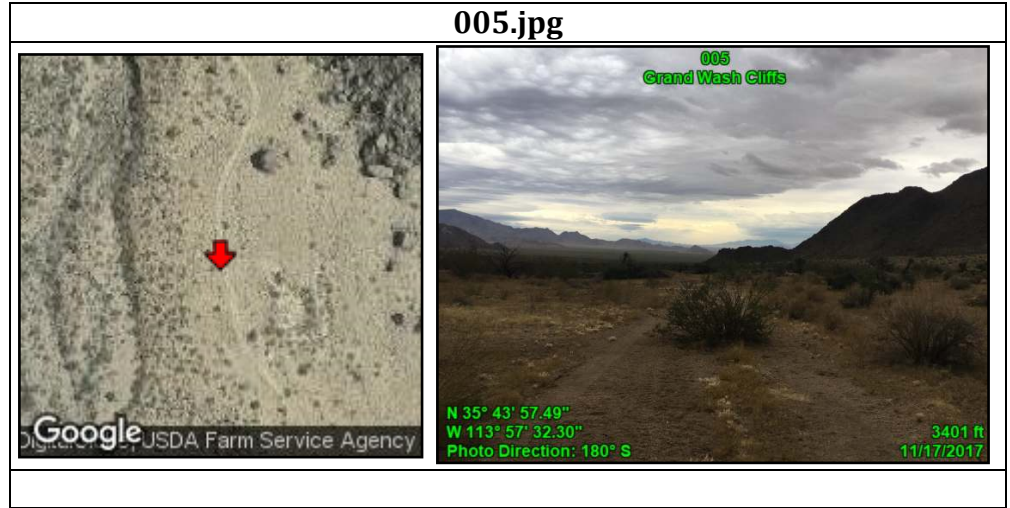
004.jpg



Grand Wash Cliffs Proposed LWC

**Attributes**

Point	005
Unit name	Grand Wash Cliffs
Route: name	None
Route: Construction	Minimal evidence of blading
Route: Improvements	None
Route: Use	2-WD Vehicles
Route: Purpose	No existing purpose; accesses dilapidated, unused ranching infrastructure
Route: Determination	Way
Other notes	Kept open solely by passage of vehicles
Route: Maintenance	None
Feature	Overgrown vegetation
Feature notes	None
Feature Class	None





Grand Wash Cliffs Proposed LWC

**Attributes**

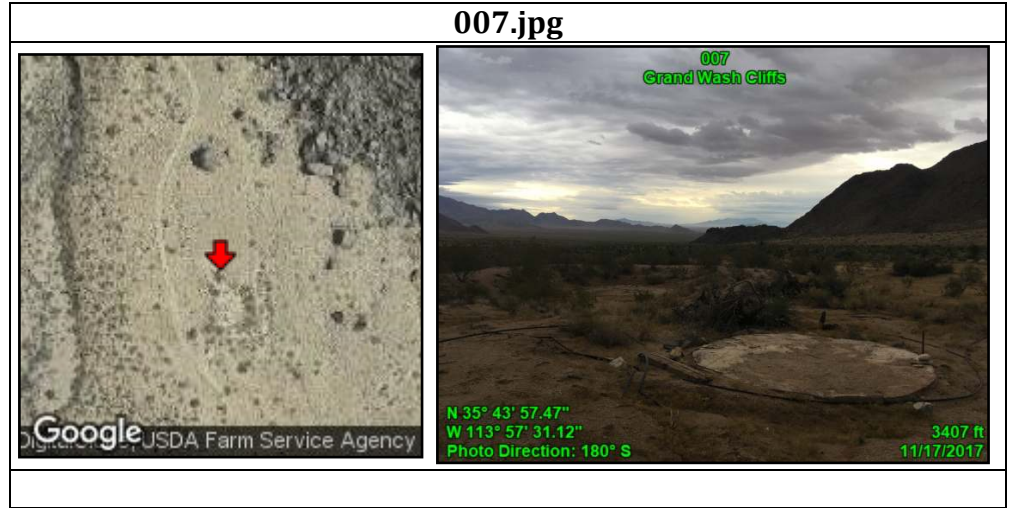
Point	006
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	Hell's Canyon Spring Development 1981
Route:	N/A
Maintenance	
Feature	Dilapidated water trough
Feature notes	Not functional, cracked, empty
Feature Class	Impact: Acceptable

006.jpg



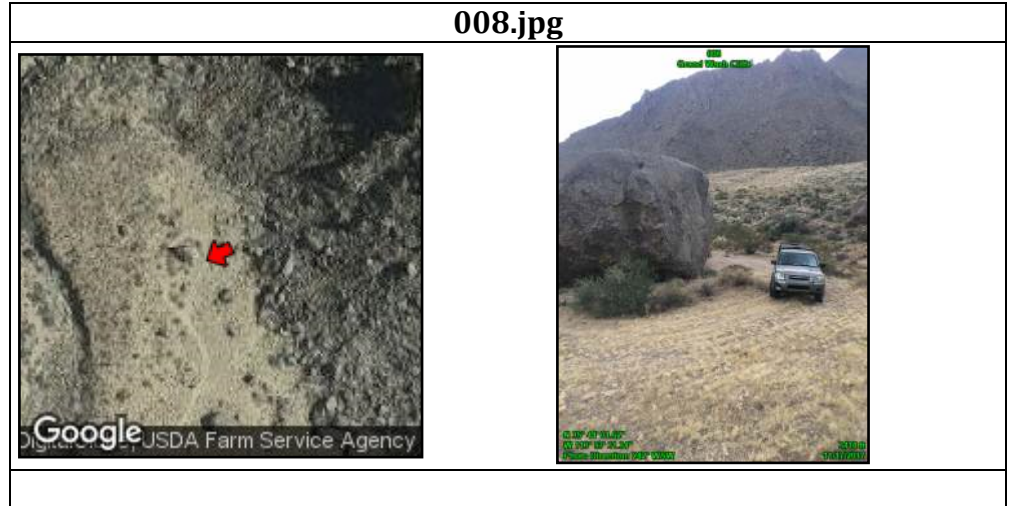
Grand Wash Cliffs Proposed LWC

Attributes	
Point	007
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	Not in use, unmaintained
Route:	N/A
Maintenance	
Feature	Water cistern platform, cut piping, overgrown stockpond
Feature notes	Feature minimally affects naturalness
Feature Class	Impact: Acceptable



Grand Wash Cliffs Proposed LWC

Attributes	
Point	008
Unit name	Grand Wash Cliffs
Route: name	None
Route: Construction	Minimal evidence of blading
Route: Improvements	None
Route: Use	2-WD Vehicles
Route: Purpose	No existing purpose; accesses dilapidated, unused ranching infrastructure
Route: Determination	Way
Other notes	Kept open solely by passage of vehicles
Route: Maintenance	None
Feature	End of route/turnaround
Feature notes	None
Feature Class	None





Grand Wash Cliffs Proposed LWC

Attributes	
Point	009
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	Piping is disconnected, severed in many locations
Route: Maintenance	N/A
Feature	Piping which would have run water from the Hell's Canyon well to the cistern
Feature notes	Feature minimally affects naturalness
Feature Class	Impact: Acceptable

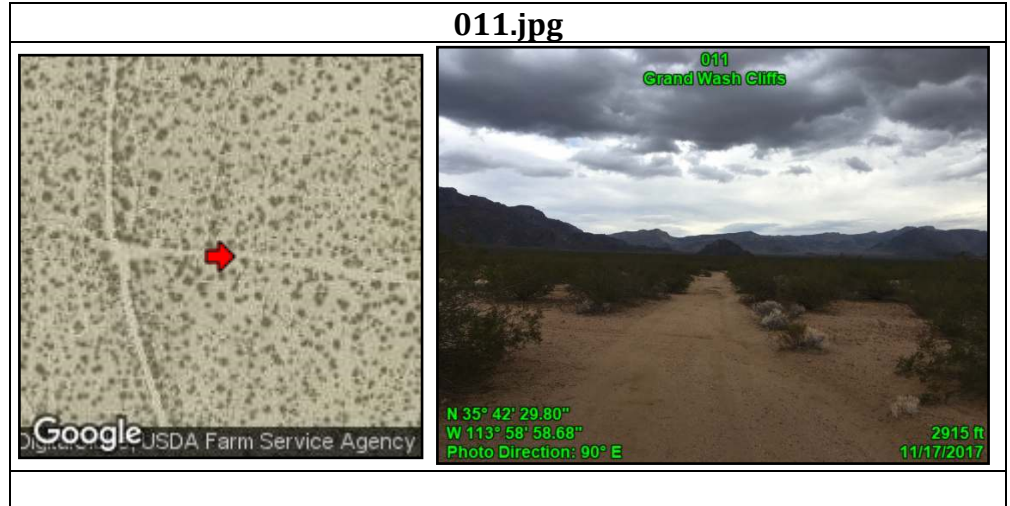


Grand Wash Cliffs Proposed LWC

Attributes	
Point	010
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	Well is disconnected from piping and laden with sediment
Route:	N/A
Maintenance	
Feature	Hell's Canyon Well
Feature notes	Feature minimally affects naturalness
Feature Class	Impact: Acceptable



Attributes	
Point	011
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	SW Corner of Unit Boundary
Route:	Semi-recent
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

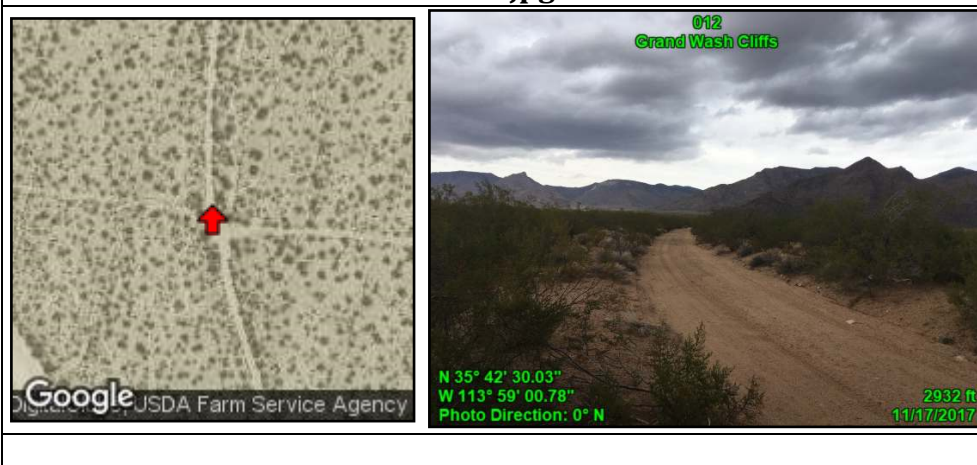


Grand Wash Cliffs Proposed LWC

**Attributes**

Point	012
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	Unit Boundary
Route:	Semi-recent
Maintenance	evidence - 1-3 years ago
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**012.jpg**



**Attributes**

Point	013
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Unit Boundary
Determination	
Other notes	None
Route:	
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**013.jpg**





Grand Wash Cliffs Proposed LWC

**Attributes**

Point	014
Unit name	Grand Wash Cliffs
Route: name	Tenny Ranch Road
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	None
Route:	Very Recent
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**014.jpg**



**Attributes**

Point	015
Unit name	Grand Wash Cliffs
Route: name	Tenny Ranch Road
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	None
Route:	Very Recent
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**015.jpg**



Grand Wash Cliffs Proposed LWC

**Attributes**

Point	016
Unit name	Grand Wash Cliffs
Route: name	Tenny Ranch Road
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	None
Route:	Very Recent
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**016.jpg**



**Attributes**

Point	017
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Private land access
Route:	Road
Determination	
Other notes	Kept open solely by passage of vehicles
Route:	Likely if needed
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**017.jpg**





Grand Wash Cliffs Proposed LWC

**Attributes**

Point	018
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Private land access
Route:	Road
Determination	
Other notes	None
Route:	Very Recent
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**018.jpg**



**Attributes**

Point	019
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	None
Route:	Very Recent
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**019.jpg**





Grand Wash Cliffs Proposed LWC

**Attributes**

Point	020
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Water cistern access
Route:	Road
Determination	
Other notes	Cherrystem
Route:	Old evidence - 3-5 years ago
Maintenance	
Feature	Water cistern and access route
Feature notes	None
Feature Class	Boundary Element

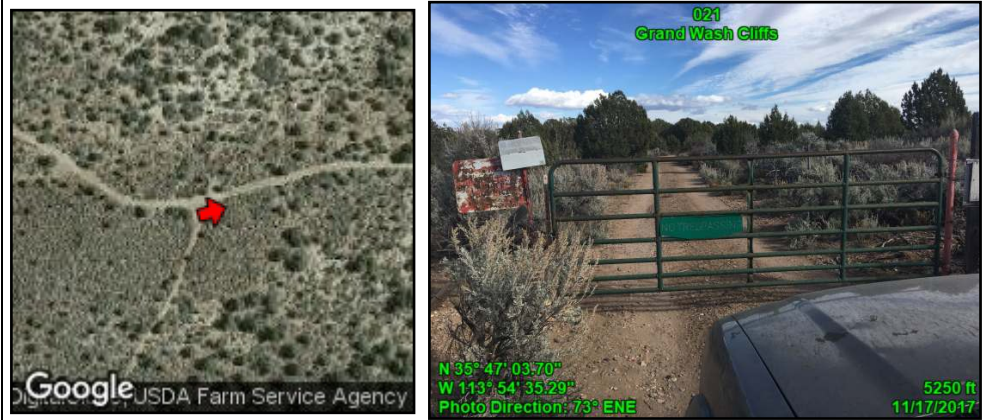
**020.jpg**



**Attributes**

Point	021
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	None
Route:	Very recent blade - past year
Maintenance	
Feature	Locked gate on private land: no trespassing
Feature notes	Prevents vehicle access to rest of unit
Feature Class	Boundary Element

**021.jpg**



Grand Wash Cliffs Proposed LWC

**Attributes**

Point	022
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Game Water Catchment, East Tank, and Lost Creek Reservoir access
Route:	Road
Determination	
Other notes	Cherrystem
Route:	Old evidence
Maintenance	
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**022.jpg**



**Attributes**

Point	023
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	Exclude this impact
Route:	N/A
Maintenance	
Feature	East Tank (name from USGS Topo)
Feature notes	Stockpond
Feature Class	Impact: Excluded

**023.jpg**





Grand Wash Cliffs Proposed LWC

**Attributes**

Point	024
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	Fed by Lost Tank
Route:	N/A
Maintenance	
Feature	Water cistern
Feature notes	None
Feature Class	Impact: Excluded

024.jpg



**Attributes**

Point	025
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	None
Route:	N/A
Maintenance	
Feature	Lost Tank (name on USGS Topo)
Feature notes	None
Feature Class	Impact: Excluded

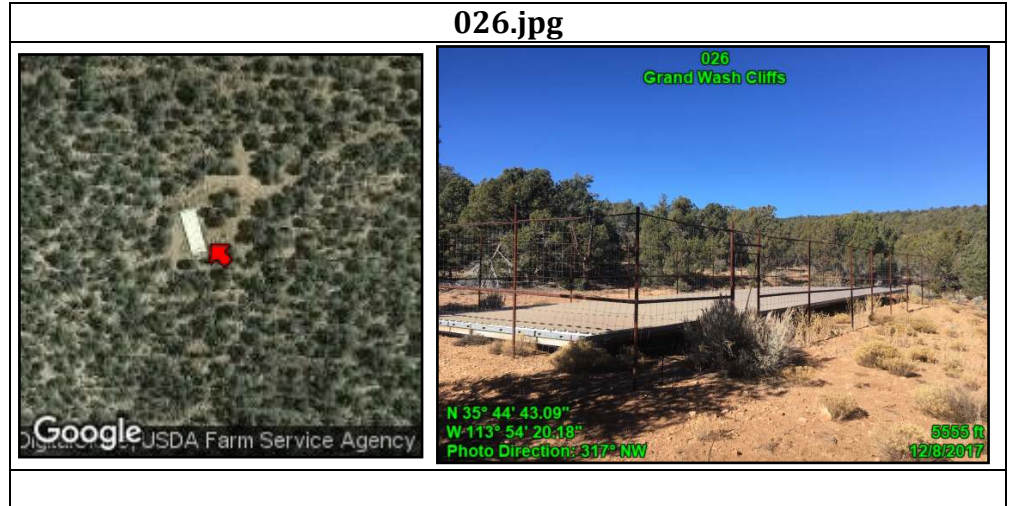
025.jpg



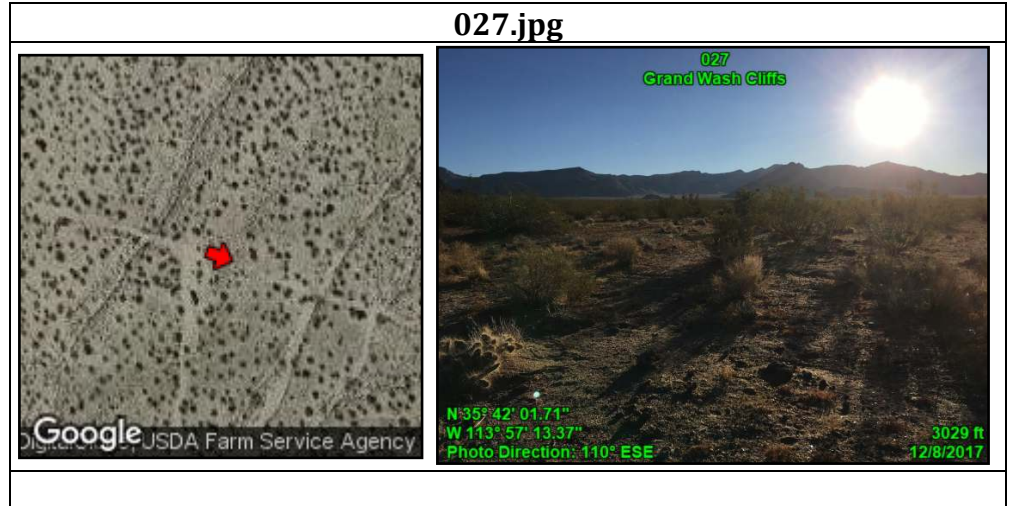


Grand Wash Cliffs Proposed LWC

Attributes	
Point	026
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	Fully functional and maintained
Route:	N/A
Maintenance	
Feature	Game Water Catchment - AZGF "Music Mountains #8"
Feature notes	None
Feature Class	Impact: Excluded



Attributes	
Point	027
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	No sign observed
Route: Purpose	No apparent purpose
Route:	Way
Determination	
Other notes	None
Route:	None
Maintenance	
Feature	Typical Condition of Route
Feature notes	Feature minimally affects naturalness
Feature Class	Primitive Route



Grand Wash Cliffs Proposed LWC

**Attributes**

Point	028
Unit name	Grand Wash Cliffs
Route: name	None
Route:	Bladed
Construction	
Route:	None
Improvements	
Route: Use	2-WD Vehicles
Route: Purpose	Multiple uses
Route:	Road
Determination	
Other notes	Unit Boundary
Route:	Old evidence - 3-5
Maintenance	years ago
Feature	Typical Condition of Route
Feature notes	None
Feature Class	Boundary Element

**028.jpg**



**Attributes**

Point	029
Unit name	Grand Wash Cliffs
Route: name	N/A
Route:	N/A
Construction	
Route:	N/A
Improvements	
Route: Use	N/A
Route: Purpose	N/A
Route:	N/A
Determination	
Other notes	Exclude this impact
Route:	N/A
Maintenance	
Feature	Water cistern/ ranching impacts
Feature notes	None
Feature Class	Boundary Element

**029.jpg**

